

Applicants are filing this Amendment and Response with a Request for Continued Examination (RCE) within the shortened statutory period. Consequently, Applicants believe that no fee is due other than the \$810 fee according to 37 C.F.R. 1.17(e) paid concurrent with this filing; however, if a fee is due please charge Deposit Account No. 230503.

Claims 33-43 were presented for examination in the Amendment and Response of September 29, 2010. The final Office Action mailed November 9, 2010 on page 4 rejects claims 33-43. Applicants note that no specific rejection of claims 41 and 42 is presented in the Office Action. Applicants submit that claims 40 and 41 are allowable; however, if claims 40 and 41 are not considered to be allowable, Applicants request that specific reasons for rejection be provided so as to allow Applicants an opportunity to properly respond to such rejections.

Applicants herein amend claims 33, 34, 37 and 41. Claims 33-43 remain pending in the application after entry of this paper.

Objection to Claim 41

The Office Action objects to claim 41 because, in line 4, "of the compression" should be "of the compression means".

Applicants herein amend claim 41 as suggested. Applicants submit that the claim 41 as now set forth overcomes the objection.

Rejection of Claims 34-36 under 35 U.S.C. §112

The Office Action rejects claims 34-36 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. In particular, the Office Action states that the abutment surface recited in claim 34 is disposed “at an end of the housing” which implies the outermost surface and that claim 35 recites that the abutment surface is formed in a recess. Thus the abutment surface is not “at an end”.

Applicants herein amend claim 34 to recite “near an end” as suggested in the final Office Action. Thus Applicants request that the rejection of claims 34-36 under 35 U.S.C. §112, second paragraph, be withdrawn.

Rejection of Claims 33-39, 42 and 43 under 35 U.S.C. §103(a)

The Office Action rejects claims 33-39 and 43 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,387,736 to Major (hereinafter “Major”) in view of U.S. Patent Application Publication No. 2005/0115840 by Dolan (hereinafter “Dolan”) and U.S. Patent No. 4,974,628 to Major (hereinafter “Major”). Applicants traverse the rejection to the extent it is applied to claims 33-39 and 43 as amended herein because the cited references, either alone or in combination, do not teach or suggest every limitation of Applicants’ invention as recited in these claims.

Major discloses a fluid control apparatus for use in a high pressure chromatography system. Major describes and shows an assembly that includes a pair of check valves in series. Each check valve includes a valve

assembly seal, for example, element 28 for the lower check valve shown in FIG. 3. Pressure is exerted on the seal 28 by a mounting block 12 and a boss 26 extending from a body portion 18 of the valve assembly. Deformation of the seal material occurs to form a fluid tight connection.

Applicants' independent claim 33 recites that the valve assembly is inside the chamber and is amended herein to also recite that the valve assembly includes "a valve seat having an outer surface disposed adjacent to the interior surface of the chamber." By way of example, FIG. 2 of Applicants' specification shows a ball valve seat 71 that has an outer surface that is adjacent to the interior surface 27a of the chamber.

Both Major and Tepermeister show and describe valve seats that are outside a region that might be interpreted to be a chamber. (See, e.g., element 32 in FIG. 3 of Major and element 52 in FIGS. 2 and 3 of Tepermeister). In addition, neither Major nor Tepermeister show or otherwise disclose that their valve seats have an outer surface that is disposed adjacent to the interior surface of their chambers.

Applicants now address the remarks provided on page 7 of the current Office Action. In particular, the Examiner argues that when creating or manufacturing the seal coating it would not be formed first, but would instead be directly coated onto the surface and boss of Major. Applicants do not argue about whether or not the seal can be formed in advance or directly formed as a coating on the surface and boss. Instead, Applicants argue that a plastic seal coating is not suitable as a replacement to the seal 28 as the latter is adjacent to seal along multiple surfaces, including a significant feature (the boss 26) having multiple surfaces along which a seal is to be achieved.

The Office Action relies upon Dolan to show a PTFE coating.

Regardless of whether or not Dolan shows this limitation, Dolan does not teach or suggest the limitations identified above as missing from the disclosure of Major (and Tepermeister).

At least for the reasons set forth above, Applicants' respectfully submit that the claim 33 is allowable over the cited references. Claims 34-39, 42 and 43 depend from base claim 33 and therefore include all the limitations of the base claim. Thus claims 34-39, 42 and 43 are allowable over the cited references at least for the reasons provided above with respect to claim 33.

Applicants address a second rejection of claims 34-39, 42 and 43 as set forth on page 5 of the Office Action. The rejection states:

Claims 33-39 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tepermeister et al (USPN 4,974,628), in view of Dolan (USPAP 2005/0115840)
and

This statement is incomplete and therefore unclear. The subsequent language of the Office Action does not refer to a third reference so Applicants address herein only Tepermeister and Dolan.

The Office Action refers to various reference numbers for the figure reproduced from Tepermeister in an inconsistent way. For example, near the bottom of page 5 of the Office Action, the end cap is referred to by "30,54, 52" and then by "30,52", and sealing members are referred to as "28, 30". The inconsistent use of reference numbers (e.g., using a single reference number to show different limitations) makes the rejection unclear and renders Applicants unable to properly address what might have been intended as the rejection.

Notwithstanding, Applicants repeat the arguments presented above with respect to the valve seat of Tepermeister being outside the chamber and Applicants respectfully request withdrawal of the second rejection of claims 33-39 and 43.

Claim 42 is rejected under 35 U.S.C. §103(a) as being unpatentable over Tepermeister in view of Dolan as applied to claim 33, and further in view of U.S. Patent No. 5,605,449 to Reed.

Claim 42 depends from independent claim 33 and includes all the limitations of its base claim. Thus claim 42 is allowable over the references cited against it at least for the reasons set forth above with respect to claim 33 and Applicants therefore respectfully request that the rejection of claim 42 under 35 U.S.C. §103(a) be withdrawn.

CONCLUSION

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims that have not been expressed.

In view of the remarks made herein, Applicants submits that the application is in condition for allowance and request early favorable action by the Examiner.

If the Examiner believes that a telephone conversation with the Applicants' representative would expedite allowance of this application, the Examiner is cordially invited to call the undersigned at (508) 303-2003.

Respectfully submitted,

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